Three species of the genus *Upogebia* (Decapoda, Crustacea) in Japan

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Three species of the genus *Upogebia* are known in Japan; *U. major* (de Haan), *U. isaeffi* (Balss) and *U. yokoyai* Makarov. These are closely related in characteristics such as rostrum, eye-stalks, abdomen, pleurae, telson and uropods except 1st legs. On 3rd maxillipeds *U. yokoyai* is unique in form of its exopod consisting only of a simple segment, as in *Gebicula monockela* (Sakai, 1967). It is interested to note that *U. yokoyai* is often found among the collections of *U. major*, bearing a parasitic shell, *Pereginamor ohshimai* Shoji (Pelecypoda, Mollusca), and *U. isaeffi* is firstly reported from Yellow Sea, the southern limit of species.

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1. *Upogebia (Upogebia) major* (de Haan, 1849)

   (Fig. 1, A-C)

   *Gebia major* de Haan, 1849, p. 165, pl. 25, fig. 7; Miers, 1879, p. 52; Ortmann, 1891, p. 54, pl. 1, fig. 7a-b; Balss, 1914, p. 90; Nakazawa, 1927, p. 1037, fig. 1997; Yokoya, 1930, pp. 543-544, fig. 4. *Upogebia major*: Miyazaki, 1936-1937, pp. 317-325; Ishikawa, 1938; Kubo and Nakazawa, 1947, p. 755, fig. 2176; Kamita, 1956, pp. 59-61, fig. 45; Utinomi, 1958, p. 93, pl. 32, fig. 1; Miyake, Sakai and Nishikawa, 1962, p. 124.


   It reaches 113 mm. Rostrum without any spines on lower margin. One or sometimes two ocular spines above antennal peduncle. Antennular 1st segment bears a small tooth distally on infero-inner margin, antennal 3rd one with a small apical protuberance. Epistome branched out into two or three spines. Exopod of 3rd maxillipeds consists of proximal segment and flagellum, the anterior slightly fails to reach distal end of ischium, and the latter reach middle of merus.

   **Colour in life.**—Body dark-green.

   **Habitat.**—Common all over Japan, living in maddy sand at protected coastal area or estuary of river, and is utilized as a fish bait especially in Seto Inland Sea and Yatsushiro, the western Japan.


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Fig. 1  A. First leg of male in *Upogebia (Upogebia) major*, ×2.3; B. First leg of female in the same species, ×2.6; C. Third maxilliped of the same species, ×4; D. First leg of male in *Upogebia (Upogebia) isaeffi*, ×2; E. First leg of male in *Upogebia (Upogebia) yokoyai*, ×2.7; F. Third maxilliped of the same species, ×6.
THREE SPECIES OF THE GENUS Upogebia


Distribution.—Olga Bay; Vladivostok region; Uchiura Bay, Hokkaido; Asadokoro, Mutsu Bay; Tokyo Bay (Katsura; Kada; Kanazawa-Hakkei); Sagami Bay; Tsu; Seto Inland Sea (Asakuchi-gun, Okayama Pref.; Onomichi; Ujina, Hiroshima Pref.; Shuso-gun, Ehime Pref.; Saijo); Tottori; Tsuyazaki, Fukusima Pref.; Hakata Bay (Najima; Muromi; Odo; Ugu-shima); Itoshima-gun, Fukusima Pref.; Ariake Sea (Aroa; Shimabara); Yatsushiro; Korea (North and south Keisho; South Heian).

2. Upogebia (Upogebia) issaeffi (Balss, 1913)

(Fig. 1, D)

Gebia Issaeffi Balss, 1913, p. 239 (non vidi).
Gebia (Upogebia) Issaeffi: Balss, 1914, pp. 89-90, figs. 48-49.
Upogebia Issaeffi: Yokoya, 1939, p. 279.
Upogebia (Upogebia) Issaeffi: de Man, 1928, pp. 33, 34, 41.
This species is similar to U. major in features. Rostrum with 3 spinules on each of lateral margins, lower margin unarmed (♀, ZLKU. 3650, 7295) or armed with a small tooth (♂, ZLKU. 9618). Hind margin of cervical groove bears a row of indistinct granules just before crossing points with linea thalas-sinica, and a few behind it. One ocular spine distinct. Antennular 1st segment bears a spinule on infero-inner margin, scaphocerite of a simple oval leaf in form, and epistome bispinose.

In female's 1st legs upper surface of dactylus bears a row of tubercles in parallel to that of same-sized tubercles on its external border, while in male's it is distinguished as a keel with a row of indistinct equidistant tubercles on lower margin with none of a sexual difference found as described by Makarov (1938).

Materials examined.—At east coast of Munakata-Oshima I., Fukuoka Pref., 1♀ (bl. 65 mm), ZLKU. 7295, Mar. 10, 1959, Yasuo Matsuo leg.; Off Shimabara, Ariake Sea, 1♀ (bl. 65), coll. by trawl-net, ZLKU. 3650, May 23, 1954, Tetsushi Senda leg.; Yellow Sea (35°02'N, 121°56'E), 50 m deep, 1♂, ZLKU. 9618, Oct. 16, 1962, Hideo Yamashita leg.

Type locality.—Vladivostok.

Distribution.—Vladivostok region; Onagawa, Miyagi Pref.; Munakata-Oshima I., Fukuoka Pref.; Off Shimabara, Ariake Sea; Yellow Sea.

3. Upogebia (Upogebia) yokoyai Makarov, 1938

(Fig. 1, E-F)

Gebia affinis Yokoya, 1930, pp. 544-546, fig. 4a-b.
Upogebia (Upogebia) yokoyai Makarov, 1938, pp. 57-59, fig. 18.

Body length of 65 mm. Rostrum with 4 lateral tubercles, anterior margin with 1-2 ocular spines, hind margin of cervical groove with a row of scanty hairs and tubercles. Scaphocerite of a rounded leaf, and spistome bispinose. Third maxillipeds bear exopod simple without a segmented flagellum, only a remarkable characteristics separating this species from U. major and U. issaeffi (Fig. 1, F).

First legs are described in detail by Yokoya (1930); dactylus in female is more slender than in male, with more scanty and undeveloped tubercles; outer surface bears a row of hairs just below a row of tubercles on its upper margin, diverging in the proximal half, inner surface is studded with a few tubercles, and continuing them a row of tubercles runs distally along lower margin. Concerning to carpus Yokoya is pointed out that "The carpus is armed with a series of small acutely pointed teeth near the upper surface; this series of teeth is more prominent than that found in
However, after observing both male's and female's specimens this series of teeth are indistinct or nothing, while in C. major and C. issaeffi that is much distinct.

**Habitat.**—This species is collected together with Upogebia (Upogebia) major (de Haan).


**References**


Ishikawa, H. 1938. Tsurie-Mushi Ryou no Kenkyu (Study of fish baits), Fukuoka.


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